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Wavelength Converted Laser Systems

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Frequently the output wavelength of a solid state laser system is not at the desired wavelength (color). The wavelength can be shifted by a variety of nonlinear processes to both longer and shorter wavelengths.

82% conversion efficiency of the output of a high average power infrared laser into the visible in a nonlinear crystal has been demonstrated. This was further converted in a gas via stimulated Raman scattering into a discrete set of visible wavelengths with high efficiency.

A prototype solid state laser system designed to treat port wine stains in humans was tested on blood vessels in a developing chick egg with promising results.

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